

U.S. Department of Commerce, Patent and Trademark Office (PTO Form 1449 modified)		Docket No. AMAT/4714.P1/TCG/ WCVD/BG	Serial No. 09/678,266
<b>COPY</b> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (Use several sheets if necessary)		Applicant Kori, et al.	Confirmation No.: 4642
		Filing Date October 3, 2000	Group Examiner
Examiner D. Zarneke			

## U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
[Signature]	A1	6,372,598	04/16/02	Kang, et al.	438	399	06/16/99
	A2	6,369,430	04/09/02	Adetutu, et al.	257	382	04/02/01
	A3	6,368,954	04/09/02	Lopatin, et al.	438	627	07/28/00
	A4	6,358,829	03/19/02	Yoon, et al.	438	597	09/16/99
	A5	6,355,561	03/12/02	Sandhu, et al.	438	676	11/21/00
	A6	6,342,277	01/29/02	Sherman	427	562	04/14/99
	A7	6,333,260	12/25/01	Kwon, et al.	438	643	06/24/99
	A8	6,284,646	09/04/01	Leem	438	629	08/19/98
	A9	6,207,487	03/27/01	Kim, et al.	438	238	10/12/99
	A10	6,042,652	03/28/00	Hyun, et al.	118	719	09/07/99
[Signature]	A11	5,306,666	04/26/94	Izumi	437	192	07/21/93
	A12	2003/0072975	04/17/03	Shero, et al.	428	704	09/26/02
	A13	2003/0049942	03/13/03	Haukka, et al.	438	778	08/22/02

## Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
							YES	NO
[Signature]	B1	01/29893	04/26/01	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
	B2	01/29891	04/26/01	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
	B3	2001-111000	04/20/01	JP	H01L	27/105	<input type="checkbox"/>	<input type="checkbox"/>

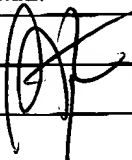
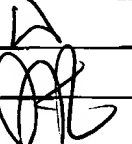
## OTHER ART

*Examiner Initial	Including Author, Title, Date, Pertinent Pages, Etc.	
C1	[Signature]	
C2		
C3		
Examiner	Date Considered	4/2/06


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(Use several sheets if necessary)			Filing Date October 3, 2000	Group 2827
Examiner D. Zameke				

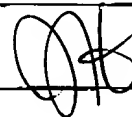
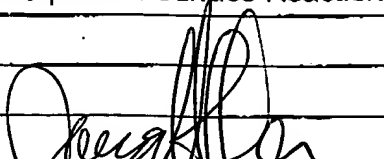
## U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
	A1	6,534,395	03/18/03	Werkhoven, et al.	438	627	03/06/01
	A2	6,482,740	11/19/02	Soininen, et al.	438	686	05/15/01
	A3	6,482,733	11/19/02	Raaijmakers, et al.	438	633	04/26/01
	A4	6,482,262	11/19/02	Elers, et al.	117	84	10/13/00
	A5	6,475,910	11/05/02	Sneh	438	685	09/22/00
	A6	6,475,276	11/05/02	Elers, et al.	117	84	10/13/00
	A7	6,468,924	10/22/02	Lee, et al.	438	763	05/31/01
	A8	6,451,695	09/17/02	Sneh	438	685	12/22/00
	A9	6,447,933	09/10/02	Wang, et al.	428	635	04/30/01
	A10	6,423,619	07/23/02	Grant, et al.	438	589	11/30/01
	A11	6,420,189	07/16/02	Lopatin	438	2	04/27/01
	A12	6,399,491	06/04/02	Jeon, et al.	438	680	04/06/01
	A13	6,391,785	05/21/02	Satta, et al.	438	704	08/23/00

## Foreign Patent Documents

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	B1	02/45167	06/06/02	WO	H01L	27/00	<input type="checkbox"/>	<input type="checkbox"/>
	B2	02/067319	08/29/02	WO	H01L	21/768	<input type="checkbox"/>	<input type="checkbox"/>
	B3	01/66832	09/13/01	WO	C30B	25/14	<input type="checkbox"/>	<input type="checkbox"/>

## OTHER ART

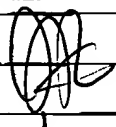

*Examiner Initial		Including Author, Title, Date, Pertinent Pages, Etc.
	C1	Klaus, et al. "Atomically Controlled Growth of Tungsten and Tungsten Nitride Using Sequential Surface Reactions," Applied Surface Science, 162-163 (2000) 479-491
	C2	
	C3	
Examiner		Date Considered 9/11/02

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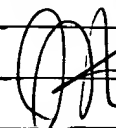
Sheet 3 of 5 sheet(s)

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Examiner D. Zarneke				

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	A1	2003/0032281	02/13/03	Werkhoven, et al.	438	640	09/23/02
	A2	2003/0031807	02/13/03	Elers, et al.	427	569	09/17/02
	A3	2003/0013320	12/05/02	Leskela, et al.	427	250	03/15/02
	A4	2002/0187631	12/12/02	Kim, et al.	438	637	12/05/01
	A5	2002/0187256	12/12/02	Elers, et al.	427	99	07/30/02
	A6	2002/0182320	01/16/03	Kim, et al.	438	778	05/31/01
	A7	2002/0162506	11/07/02	Sneh, et al.	118	715	06/28/02
	A8	2002/0155722	10/24/02	Satta, et al.	438	704	04/15/02
	A9	2002/0121697	09/05/02	Marsh	257	751	04/30/02
	A10	2002/0117399	08/29/02	Chen, et al.	205	125	02/23/01
	A11	2002/0109168	08/15/02	Kim, et al.	257	295	01/30/02
	A12	2002/0106846	08/08/02	Seutter, et al.	438	200	02/02/01
	A13	2002/0105088	08/08/02	Yang, et al.	257	774	10/31/01

## Foreign Patent Documents

*Examiner Initial		Document Number	Date	Country	Class	Subclass	Translation	
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## OTHER ART

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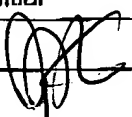

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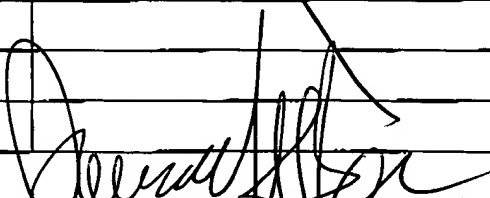
## U.S. Patent Documents

*Examiner Initial		Document Number	Issue Date	Applicant(s) Name	Class	Subclass	Filing Date If Appropriate
	A1	2002/0094689	07/18/02	Park	438	694	03/07/02
	A2	2002/0090829	07/11/02	Sandhu, et al.	438	761	01/31/02
	A3	2002/0076837	06/20/02	Hujanen, et al.	438	3	11/28/01
	A4	2002/0076507	06/20/02	Chiang, et al.	427	569	10/24/01
	A5	2002/0061612	05/23/02	Sandhu, et al.	438	151	01/14/02
	A6	2002/0055235	05/09/02	Agarwal, et al.	438	430	10/29/01
	A7	2002/0052097	05/02/02	Park	438	507	05/03/01
	A8	2002/0048880	04/25/02	Lee	438	253	08/08/01
	A9	2002/0037630	03/28/02	Agarwal, et al.	438	430	10/29/01
	A10	2002/0031618	03/14/02	Sherman	427	569	10/09/01
	A11	2002/0019121	02/14/02	Pyo	438	618	06/20/01
	A12	2002/0007790	01/24/02	Park	118	715	05/03/01
	A13	2002/0004293	01/10/02	Soininen, et al.	438	584	05/15/01

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## OTHER ART

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	C2	
	C3	
Examiner		
	Date Considered	9/21/06

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(Use several sheets if necessary)			
Examiner D. Zarneke			

## U.S. Patent Documents

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	A1	2002/0000598	01/03/02	Kang, et al.	257	301	07/26/01
	A2	2001/0054769	12/27/01	Raaijmakers, et al.	257	758	04/26/01
	A3	2001/0054730	12/27/01	Kim, et al.	257	301	05/23/01
	A4	2001/0029094	10/11/01	Mee-Young, et al.	438	597	09/16/99
	A5	2001/0028924	10/11/01	Sherman	427	255.28	05/24/01
	A6	2001/0024387	09/27/01	Raaijmakers, et al.	365	200	02/22/01
	A7	2001/0009695	07/26/01	Saanila, et al.	427	255.39	01/18/01
	A8	2001/0002280	05/31/01	Sneh	427	255.28	12/22/00
	A9						
	A10						
	A11						
	A12						
	A13						

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**SUPPLEMENTAL INFORMATION  
DISCLOSURE STATEMENT BY  
APPLICANT**

(Use as many sheets as necessary)

Sheet 1 of 1

Application Number	09/678,266
Filing Date	October 3, 2000
First Named Inventor	Xi, et al.
Group Art Unit	2827
Examiner Name	David Zarneke
Attorney Docket Number	AMAT/4714.P1/TCG/WCVD/PJS
Submission Date	September 15, 2004

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	6,635,965	10/21/2003	Lee, et al.	
	A2				
	A3				
	A4				
	A5				
	A6				
	A7				
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	A15				
	A16				
	A17				
	A18				

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**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T <sup>2</sup>
	C1	"Pulsed Nucleation for Ultra-High Aspect Ratio Tungsten Plugfill"; San-Hyeob Lee, et. al; Materials Research Society, 2002, 649-653.	
	C2	Yang, et al. "Atomic Layer Deposition of Tungsten Film from WF <sub>6</sub> /B <sub>2</sub> H <sub>6</sub> : Nucleation Layer for Advanced Semiconductor Device," Conference Proceedings ULSI XVII (2002) Materials Research Society.	

Examiner

Date Considered

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